

REMARKS/ARGUMENTS

Claims 1-6 and 12-20 were pending in the application and rejected. Applicant has amended claim 6, cancelled claims 1-5 and 12-20 without prejudice and added new claims 21-25. Applicant understands that the Drawings were objected to as not conforming to the Specification after amendment of the Drawings. Applicant further understands that objections under section 112 have been made to claims 1, 6, 14, 15 and 20. Applicant also understands original claims 1-5 and 15-20 to be rejected over Crewe in view of Jin, further in view of Ikeda and further in view of Hieda, claims 6, 12 and 13 to be rejected over Crewe in view of Jin, further in view of Ikeda, further in view of Hieda and further in view of Hamada, and claim 14 to be rejected over Crewe in view of Jin, further in view of Ikeda, further in view of Hamada and further in view of Teo.

Regarding the objection to the Drawings, Applicant amended the Drawings to incorporate an originally claimed element (the controller) and has now amended the Specification to take into account the controller as well. Applicant submits that the objection to the Drawings is thus moot. Regarding the objections to the claims, Applicant has cancelled claims 1, 14, 15 and 20, rendering the objections there moot. For claim 6, Applicant has clarified the reference to the read head. Applicant has reviewed claim 6 for a reference to "recording medium" and has not found such a reference.

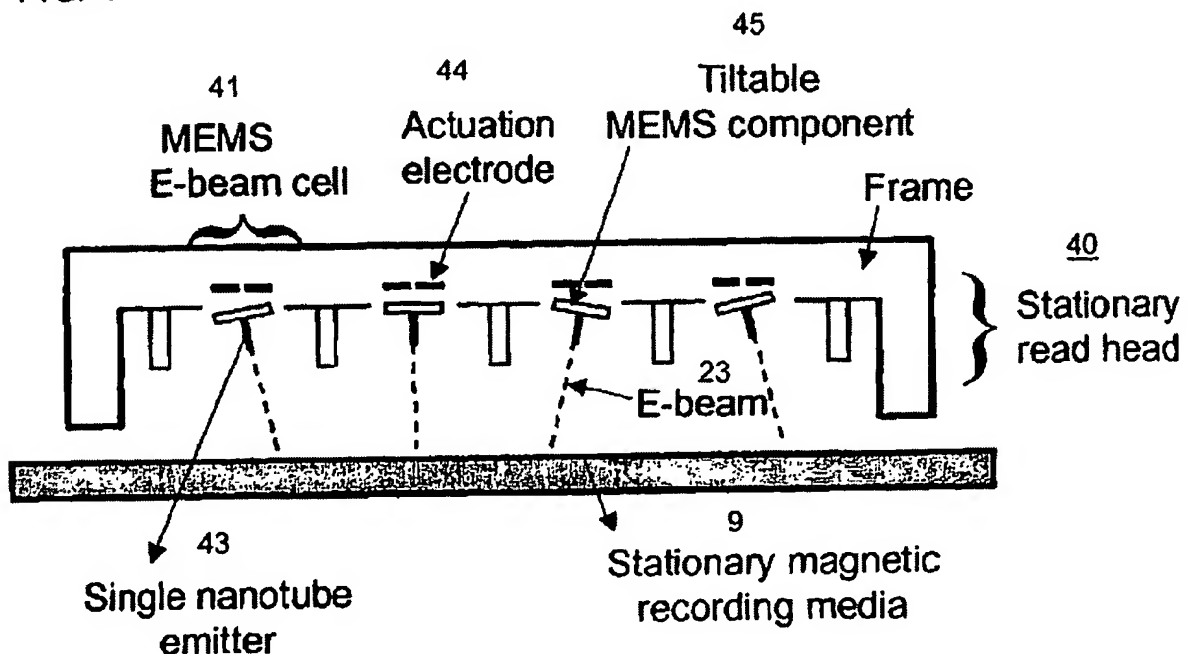
Applicant does not concede the propriety of the rejections of the previously presented claims over the prior art. However, Applicant submits that the claims as amended distinguish over the prior art of record. In particular, Applicant submits that the claims as amended make apparent a structure and process which involves a carbon nanotube apparatus which is distinct from that used in the prior art and which allows for operation different from that in the prior art. The claimed carbon nanotube head includes tracking and detection electrodes which allow for operation removed from the media in question and for adjustment of track locations based on both positioning relative to media and imperfections in tracks on the media. This process allows for feedback using these electrodes and adjustment of the head

thereby. Accordingly, Applicant submits that the amendments render the rejections moot, and therefore requests withdrawal of the rejections.

Applicant notes that claim 6, as amended, claims finding a track through a rough adjustment (motion of an actuator) and correction of the location of a read head through use of deflection of an e-beam (without moving the actuator). The method of claim 6 also includes writing data, and then reading that same data before a rotation of the underlying disk occurs, allowing for nearly instantaneous read-after-write. All of this is done through use of carbon nanotube-based read and write heads. Thus, motion of the actuator is required to a less restrictive tolerance than in prior art systems, and corrections are made through deflection of an e-beam, unlike what is found in the prior art.

Applicant submits that the cited prior art teaches away from this approach. Crewe teaches use of an electron gun – a very different technology from the carbon nanotube as claimed. Jin teaches use of MEMS devices for manipulating where a head is aimed, without moving an otherwise stationary head, as shown here:

FIG. 4



Other contradictions between the prior art references cited in the Office Action can be found as well.

Moreover, it has not been shown that such an adaptive read-after-write technique as claimed is present in the prior art.

Additionally, with regard to claim 6, Applicants have also claimed use of a boron-nitride window to seal the enclosure, allowing for a small evacuated space (the carbon nanotube head) which is easier to manufacture and control.

CONCLUSION


In view of the foregoing, Applicant(s) believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at the number listed below.

Respectfully submitted,

TIPS GROUP

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